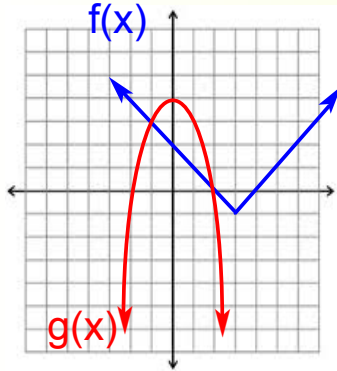


Alg. 2 Warm Up #1-5

1. Find an equation for $f(x)$ and $g(x)$ 2. Solve: $g(x) \geq f(x)$ 3. Solve for y :

$$2x - 1 = \sqrt{y + 3}$$

HW Questions (#3)

$$\begin{aligned}
 1) \quad y &= -2(x-2)^2 + 35 & -2(x-2)^2 + 35 &= -2x + 15 \\
 y &= -2x + 15 & -2(x^2 - 4x + 4) + 35 &= -2x + 15 \\
 & \downarrow & & \vdots \\
 y &= -2(-1) + 15 & & \downarrow \\
 y &= 17 & -2(x^2 - 5x - 6) &= 0 \\
 & & -2(x+1)(x-6) &= 0 \\
 & & x &= -1, 6 \\
 & & (-1, 17) & (6, \quad)
 \end{aligned}$$

HW Questions (Tan worksheet)

2 a) $-1 \leq x \leq 5$

b) $x = 6$ $x = -11$

c) $x \leq -15$ or $x \geq 29$

d) $-7 < x < \frac{31}{3}$

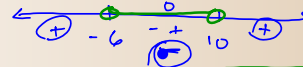
e) $-6 < y < 10$

f) $2 \leq x \leq 4$

e) $4 > y^2 - 4y - 56$

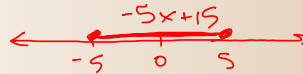
$0 > y^2 - 4y - 60$

$0 > (y - 10)(y + 6)$



$-6 < x < 10$

f) $5 \geq |-5x + 15|$

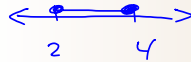


$-5 \leq -5x + 15 \leq 5$

$$\frac{-20}{-5} \leq \frac{-5x}{-5} \leq \frac{-10}{-5}$$

$4 \geq x \geq 2$

$2 \leq x \leq 4$

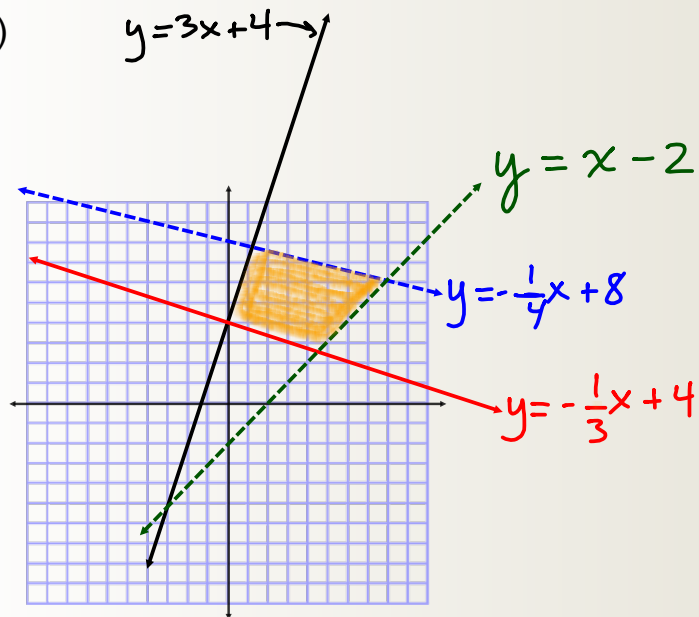


HW Questions (Tan worksheet)

$$3a) \begin{cases} y < -x + 8 \\ y \leq \frac{1}{4}x + 3 \\ y > -1 \\ y \geq -2x - 3 \end{cases}$$

HW Questions (Tan worksheet)

4a)



HW Questions (Tan worksheet)

$$4c) \quad 3x + 4y \leq 12$$

$$y > \frac{1}{2}(x-1)(x+3)$$

$$y \geq 1$$

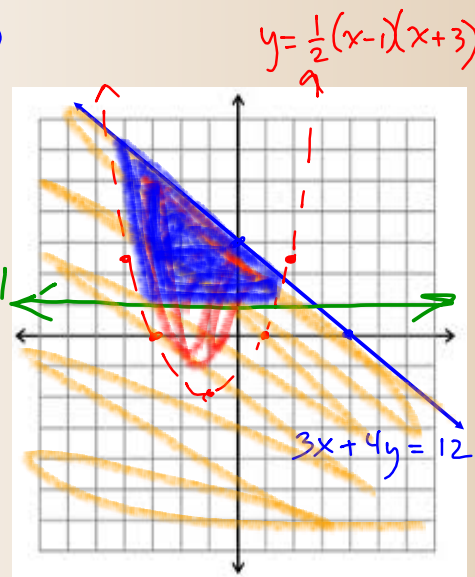
vertex

$$y = \frac{1}{2}(-1-1)(-1+3)$$

$$= \frac{1}{2}(-2)(2)$$

$$= -2$$

$$y = 1$$



HW Questions (Tan worksheet)

5a) $6^4 x^6$

b) $\frac{-6a^7c^7}{b}$

c) $\frac{72y^8}{w^2}$

d) $\frac{x^7}{7y^2}$

e) $\frac{125y^4}{x^4}$

c) $(2w^2y^4)^3(3w^{-4}y^{-2})^2$

$$\underline{8w^6y^{12}} \cdot \underline{9w^{-8}y^{-4}}$$

$$72w^{-2}y^8$$

↓

HW Questions (Tan worksheet)

f) $\frac{9a^{11}b^8}{a^{-4}b^5} \div \frac{27a^7}{4a^3b^{-6}}$

$$1 \cdot \frac{\cancel{9}a^{15}b^3}{1} \cdot \frac{\cancel{4}a^3b^{-6}}{\cancel{27}a^7}$$

$$\frac{4a^{18}b^{-3}}{3a^7} \quad \downarrow$$

$$\frac{4a^{11}}{3b^3}$$

Notes:

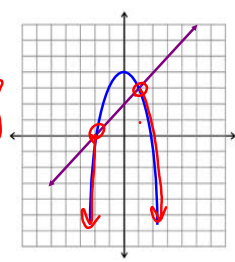
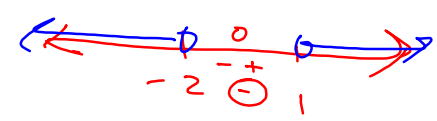
Solving in one variable $-x^2 + 4 < x + 2$ Answer is in terms of **x only**, not points (x, y).

With reasoning and graphing:

Where is the parabola less than (under) the line?

$$x < -2 \text{ or } x > 1$$

With Algebra:

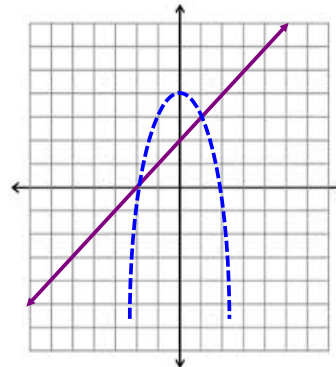
$$\begin{aligned}
 -x^2 + 4 &< x + 2 \\
 +x^2 - 4 &+x^2 - 4 \\
 0 &< x^2 + x - 2 \\
 0 &< (x - 1)(x + 2)
 \end{aligned}$$



$$x < -2 \text{ or } x > 1$$

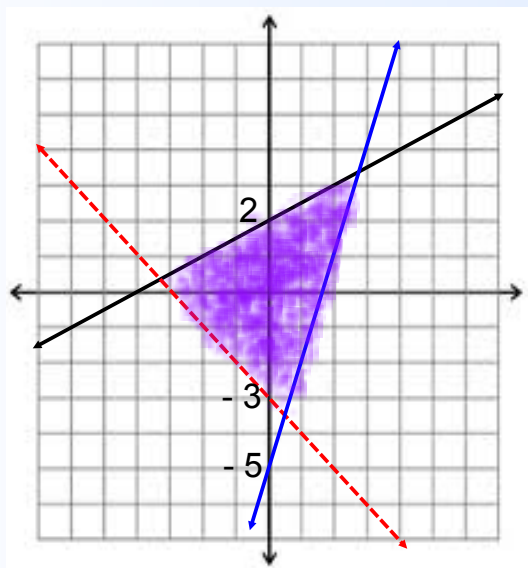
Solve the system of inequalities:

$$y < -x^2 + 4$$

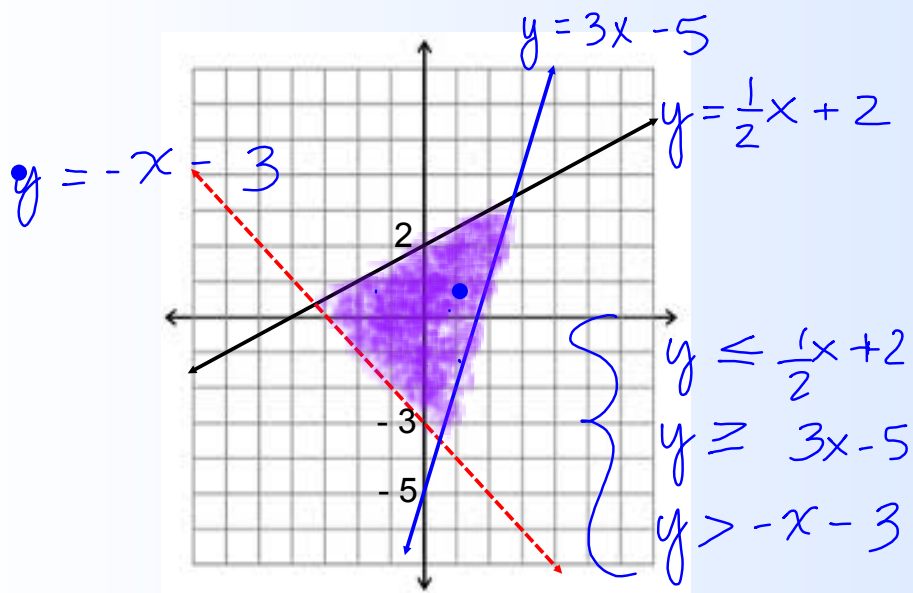
$$y \leq x + 2$$



Write a system of inequalities for the region represented:



Write a system of inequalities for the region represented:



Week 1 Classwork

Warm Up on top

Graphing Inequalities

Writing Inequalities from a graph

*Classwork packets get turned in on Fridays.

Prep for chapter 5, solve for y:

$$\frac{x-3y}{4} + 2(x+1) = 7$$

$$\frac{x-3y}{4} + 2x + 2 = 7 - 2 - 2x$$

$$\frac{x-3y}{4} - 2x - 2$$

$$\frac{4}{1} \cdot \frac{x-3y}{4} = (5-2x)4$$

$$x-3y = 20-8x$$

$$\frac{-3y}{-3} = \frac{20}{-3} - \frac{9x}{-3}$$

$$y = 3x - \frac{20}{3}$$

$$\begin{array}{r} x + 2\sqrt{y+1} = 3x + 4 \\ -x \qquad \qquad -x \end{array}$$

$$\frac{2\sqrt{y+1}}{2} = \frac{2x+4}{2}$$

$$(\sqrt{y+1})^2 = (x+2)^2$$

$$y+1 = x^2 + 4x + 4$$

$$y = x^2 + 4x + 3$$

$$\frac{6x-1}{y} - 3 = 2$$

$$\cancel{y} \cdot \frac{6x-1}{\cancel{y}} = 5y$$

$$\frac{6x-1}{5} = \frac{5y}{5}$$

$$y = \frac{6x}{5} - \frac{1}{5}$$

HW: Green WS # 4

Bring book
Monday